

## **REMARKS**

The Office Action mailed October 17, 2007 has been reviewed, and the comments of the U.S. Patent Office have been considered. Claims 1-15 are pending in this application. By this Amendment, claims 12-15 have been added. The amendments are supported in the specification by at least page 96 (lines 7-8) and by Fig. 1.

Independent claims 1-11 stand rejected under 35 U.S.C. §103(a) over Schmitz (US6622804) in view of Heidelberg (US4754207) and further in view of Li (US6278216). The rejection is respectfully traversed.

The applied references, alone or in combination, fail to show, describe, teach, or suggest an electric car or vehicle, or a method of propelling a car or vehicle, involving at least one motor and/or generator comprising two or more electromagnetic power circuits that provide power to the motor and/or generator, the circuits having no electrical connection to each other (per claim 1) or being sufficiently isolated to substantially eliminate electromagnetic and electrical interference between the circuits (per claims 5, 8 and 11), and the Office has failed to provide an explicit analysis identifying a reason that would have prompted a person of ordinary skill in the relevant field to combine Schmitz with the secondary references.

The Office Action at pages 2-3 acknowledges that the primary reference (Schmitz) fails to show, describe, teach, or suggest the following features of one or more of the independent claims:

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|-----------------------|--|
| <b>Deficiency [a]</b> | a motor and/or generator that is an <u>adaptive electric machine</u> (see claims 1, 5, 8, and 11);   |
| <b>Deficiency [b]</b> | an adaptive electric machine having <u>two or more electromagnetic power circuits</u> (see claims 1, 5, 8, and 11);  |
| <b>Deficiency [c]</b> | an adaptive electric machine with two or more electric power circuits that are sufficiently isolated to substantially eliminate <u>electromagnetic interference</u> between the two circuits (see claim 5, 8, and 11); |
| <b>Deficiency [d]</b> | an adaptive electric machine with two or more electric power circuits that are sufficiently isolated to substantially eliminate <u>electrical interference</u> between the two circuits (see claim 5, 8, and 11); and  |
| <b>Deficiency [e]</b> | an adaptive electric machine with two or more electric power circuits that have <u>no electrical connection</u> to each other (see claim 1).   |

The Office Action at page 3 asserts that Li remedies Deficiency [a] because Li purportedly describes motor control system with a processor that would purportedly form an adaptive control scheme. The Office Action at page 3 also asserts that Heidelberg remedies Deficiency [c] because Heidelberg purportedly describes a motor with structurally and magnetically isolated groups of stator core elements. However, nowhere in the Office Action does the Office provide an explicit analysis identifying how the secondary references remedy Deficiencies [a]-[e]. Accordingly, the Office thus fails to set forth a *prima facie* case of obviousness.

The Office has not provided the "clear articulation of the reason(s) why the claimed invention would have been obvious" as set forth in recent PTO guidance regarding the standard for obviousness. *See* 72 FR 57526 at 57528. For example, the Office Action does not provide findings of fact concerning the state of the art, or provide the rational underpinning for the asserted combination of references. Accordingly, the Office fails to set forth a *prima facie* rejection under §103(a). Furthermore, the Office Action's assertion at page 3 that the secondary references "are in the same field of endeavor" and "would have been recognized" and combined with Schmitz is not a "clear articulation of a reason" for the combination and is thus insufficient under the recent PTO guidance. In particular, no sufficiently articulated reason is provided at all in regard to the rejection of claim 11 because the Office asserts only that the claimed method would be obvious from the structures of the applied references.

With regard to Deficiency [a], the Office at pages 3 and 4 of the Office Action acknowledges that Li, a secondary reference to Schmitz, does not show or describe an adaptive electric machine because this feature is asserted to be obvious from the disclosure of Li, or to be an unidentified capability of the Li device. However, Li does not support the Office's position because Li does not show, describe, teach, or suggest Li's processor MPU to provide adaptive control. The Office Action at page 3 interprets Li's device to be an "adaptive electric machine" simply because Li's controller MPU allegedly could provide a degree of control to the Li device in response to user inputs, operating conditions, and operating parameters. However, contrary to MPEP §2111.01, this interpretation is not consistent with at least the instant specification, which describes an adaptive system in which the control system itself changes in response to user inputs, machine operating conditions, and machine operating parameters. *See* the instant specification at page 70 (lines 13-15). Li does not show, describe, teach, or suggest an adaptive

electric machine because Li's controller MPU is not shown or described to have the ability to change how it operates.

With regard to Deficiencies [b] and [e], the applied references fail to show systems with two or more power circuits that are electrically isolated from each other, as each of the applied references show an unimpeded connection to a common power source or make no reference at all to a power source.

With regard to Deficiencies [c], [d], and [e], the Office Action at page 5 asserts that Heidelberg's grouping of stator core elements with phases equates to the electrical or magnetic separation of those groups. However, Heidelberg does not support that interpretation. The division of Heidelberg's phases among groups of stators does not support the Office's assertion that Heidelberg shows, describes, teaches, or suggests the absence of an electrical connection between Heidelberg's phases, or the substantial elimination of electrical interference between Heidelberg's phases. Heidelberg fails to show, describe, teach, or suggest any structure that demonstrates these features, and the Office thus fails to establish a *prima facie* case of obviousness because it does not provide the "clear articulation of the reason(s) why the claimed invention would have been obvious" as set forth in recent PTO guidance regarding the standard for obviousness. *See* 72 FR 57526 at 57528. .

Also, Heidelberg fails to show or describe power circuits that are isolated to eliminate electrical and electromagnetic interference between the circuits. Heidelberg at Figs. 1 and 3, and at col. 4, lines 45-46, describes a stator 6 with electromagnets 12 joined to form a group 22 of electromagnets. Heidelberg at col. 5, lines 35-42, also describes that bases 32 of each electromagnet 12 of group 22 meet in a peripheral direction, and that bases 32 "do not meet at the boundary between each group 22 and the adjacent group 22, so that there is a disconnection of the magnetic circuit here" (emphasis added). By limiting the disconnection to "here" (i.e., the peripheral boundary between the outermost bases 32 of group 22), Heidelberg limits the disconnection of the magnetic circuit to only the outermost bases 32 of each group 22 and not to the entire electromagnet group. Heidelberg supports this understanding of "here" at Fig. 3 and at col. 7, lines 2-5, where it explains that the reason for the disconnect is to permit gap 40 (located at the point of disconnection) to interact with sensor 28 and trigger the switching of the electromagnets. Heidelberg does not provide any support for, or show any structure that would support, an understanding of "here" that would require the magnetic separation of entire

electromagnetic groups from each other. This understanding is further supported in Heidelberg at Figs. 1 and 3 and col. 4, lines 32-33, where it describes electromagnetic 12 being attached to a common stator 6 structure, as Heidelberg fails to show or describe stator 6 being designed to electromagnetically separate one group 22 from another. Heidelberg is thus limited to only the "disconnection of the magnetic circuit" at adjacent bases, and does not suggest electromagnetic isolation of one group , or circuit, from another.

For the foregoing reasons, the applied references, alone or in combination, fail to show, describe, teach, or suggest all of the features recited in the independent claims, as a whole, and the dependent claims thereof, and the Office has failed to provide an explicit analysis identifying a reason that would have prompted a person of ordinary skill in the relevant field to combine Schmitz with the secondary references. It is respectfully requested that the rejection be withdrawn.

New claims 12-15 are allowable over the applied art for at least the same reasons provided above.

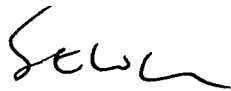
**CONCLUSION**

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of this Application and the prompt allowance of the pending claims.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the undersigned to expedite prosecution of the application.

The Commissioner is hereby authorized by this paper to charge any fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-3840. **This paragraph is intended to be a CONSTRUCTIVE PETITION FOR EXTENSION OF TIME in accordance with 37 C.F.R. § 1.136(a)(3).**

Respectfully submitted,



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